

**Claims**

1. Data arrangement for dental-care environment, which comprises at least one dental-care-related device (U, T) and a data system (S), **characterised** in that
  - 5 a data transmission communication has been arranged between the dental-care-related device (U, T) and the data system (S); and
    - the dental-care-related device (U, T) comprises means for identifying a predetermined event,
    - means for transmitting information related to said event to the data
  - 10 system (S) as a response to identifying the predetermined event, and
    - means for storing said information in the data system (S) item-specifically.
  - 15 2. Arrangement according to claim 1, **characterised** in that the predetermined event is a treatment event the target of which being a patient; and
    - the means for storing have been arranged to store information related to the event patient-specifically.
  - 20 3. Arrangement according to claims 1 or 2, **characterised** in that the predetermined event is a treatment event, the target of which being certain tooth and/or certain tooth surface of a patient.
  - 25 4. Arrangement according to claim 1, 2, or 3, **characterised** in that
    - the predetermined event is related to dental-care instruments (X); and
  - 30 5. Arrangement according to any one of claims 1-4, **characterised** in that
    - the predetermined event is related to dental-care materials (Y) and/or their packages; and
  - 35 6. Arrangement according to any one of claims 1-5, **characterised** in that the dental-care-related device (U, T) comprises means for receiving information related to a predetermined event.

7. Arrangement according to any one of claims 1-6, characterised in that the data system (S) is configured for identifying an unsterilised, unsuitable for the treatment event in question or otherwise unfit instrument (X); and

5 as a response to said identification, indicating before use of the instrument that it is not suitable for use.

8. Arrangement according to any one of claims 1-7, characterised in that the dental-care-related device is a dental unit (U) and/or a sterilisation device (T) of dental-care instruments.

10 9. Arrangement according to any one of claims 1-8, characterised in that the information related to the predetermined event comprises at least one of the following data: data of the type of dental-care instrument (X), identification data of the dental-care instrument (X), maintenance status data of the dental-care instrument (X), sterilisation status data of the dental-care instrument (X), point of time of sterilisation of the dental-care instrument (X), data of connecting the dental-care instrument (X) to the dental unit (U), data of taking the dental-care instrument (X) to use in connection with a treatment event, data of the point of time the dental-care instrument (X) was taken to use, data of operation parameter values of the dental-care instrument (X) during the dental treatment event comprising data of operation time, rotation speed and/or power used, data of disconnecting the dental-care instrument (X) from the dental unit (U), data of disconnection time of the dental-care instrument (X) from the dental unit (U), data of starting and ending the sterilisation treatment of the dental-care instrument (X), data of the starting and ending times of the sterilisation treatment of the dental-care instrument (X), data of material (Y) to be used in the treatment, identification data of the package of material (Y), data of the point of time of arrival of the material package (Y) to the clinic, identification data of the manufacturing lot of the material package (Y), data of used-by date of the material package (Y), data of opening the material package (Y), data of the point of time of opening the material package (Y), data of the point of time of use of material (Y), data of the amount of material (Y) used, data of the treatment plan of the patient, data of performing a certain treatment procedure, data of the point of time of performance of a certain treatment procedure.

10. Arrangement according to any one of claims 1-9, characterised in that the means for identifying the predetermined event comprise an electronic reader device.

11. Arrangement according to claim 10, characterised in that

5 the electronic reader device is a radio frequency tag (RFT) reader.

12. Arrangement according to claim 10, characterised in that the electronic reader device is a barcode reader.

13. Arrangement according to any one of preceding claims 1-12, characterised in that

10 the data system (S) comprising also a user interface and display means connected with it; and

the data system (S) is configured for transmitting to the display means information stored in the data system (S) and/or messages based on said information.

15 14. Arrangement according to any one of preceding claims 1-13, characterised in that

the data system is configured for transmitting to the dental-care-related device (U, T) control data relating to the treatment plan and/or instruments; and

20 the dental-care-related device (U, T) has been arranged to be controlled according to said control data as a response to receiving control data.

15. Method for maintaining an electronic dental-care register for a dental-care environment in a data arrangement, the dental-care environment comprising at least one dental-care-related device (U, T) and a data system (S), characterised in that

25 a data transmission communication is formed between the dental-care-related device (U, T) and the data system (S);

a predetermined event is identified (2-1, 3-1, 4-2, 4-5, 4-9) in the dental-care-related device (U, T);

30 information related to the identified event is sent (2-2, 3-5, 4-3, 4-6, 4-10) from the dental-care-related device (U, T) to the data system (S);

35 said information is received (2-3, 3-6, 4-4, 4-7, 4-11) in the data system (S); and

35 said information is stored (2-3, 3-6, 4-4, 4-7, 4-11) in the data system (S) item-specifically.

16. Method according to claim 15, characterised in that

the predetermined event is targeted to a patient, a patient's tooth and/or its certain surface; and

the information related to the event is stored patient-specifically.

17. Method according to claim 15 or 16, characterised in that

5 the predetermined event is addressed to a treatment instrument (X); and

the information related to the event is stored instrument-specifically.

18. Method according to claim 15, 16 or 17, characterised in that

10 the predetermined event is addressed to dental-care material (Y) and/or material packages; and

the information related to the event is stored material-specifically.

19. Method according to any one of preceding claims 15-18, characterised in that

15 an individual instrument is identified;

identification data is compared with the treatment plan of the patient who is the object of the treatment procedure and/or with the status data of the individual instrument in question; it is detected if instrument (X) is unsterilised or does not correspond the treatment plan; and

20 the said detection is expressed (5-6) as a response to detecting an unsterilised instrument or an instrument not corresponding the treatment plan.

20. Method according to any one of claims 15-19, characterised in that information related to the predetermined event is stored in the patient database and/or stock control database of the dental clinic data system (S).

21. Method according to any one of preceding claims 15-20, characterised in that

30 taking an instrument to use is identified as a predetermined event; as a response to identifying taking the instrument in use, data of taking the instrument to use is transmitted and stored (5-2) in the data system instrument-specifically and patient-specifically,

35 taking material in use is identified as a predetermined event; as a response to identifying taking the material in use, data of taking the material to use is transmitted and stored (5-18) in the data system material-specifically and patient-specifically,

a performed dental procedure is identified as a predetermined event; and

as a response to identifying the performed dental procedure, data of the performed dental procedure is transmitted and stored (5-15, 5-20) in the 5 data system patient-specifically.

22. Method according to any one of preceding claims 15-21, characterised in that

instrument sterilisation data is maintained instrument-specifically in the data system;

10 instrument sterilisation data is checked (5-4) before taking an instrument to use;

data of patient treatment plan is maintained in the data system;

the treatment plan data of a patient is verified before commencing treatment procedures;

15 material data is maintained in the data system;

material data is checked before taking material to use.

23. Dental-care-related device for performing dental-care events in a dental-care environment, characterised in that it comprises

means for forming a data transmission communication with a data 20 system (S) for the dental-care environment;

means for identifying a predetermined event; and

means for transmitting information related to the identified event to the data system (S).

24. Dental-care-related device according to claim 23, characterised in that it is a dental unit (U).

25. Software product in a data arrangement for dental-care environment, the dental-care environment comprising at least one device (U, T) related to dental treatment and a data system (S), which software product comprises a program stored on program storage means and being readable by a 30 computer, characterised in that it comprises

a first routine by which a data transmission communication between the dental-care-related device (U, T) and the data system (S) is formed;

a second routine by which a predetermined event is identified in the dental-care-related device (U, T); and

35 a third routine by which information related to the identified event is transmitted from the dental-care-related device (U, T) to the data system (S).

26. Software product according to claim 25, *characterised* in that said program comprises a routine for running a method according to any one of claims 15-21.

27. Software product in a data arrangement for dental-care environment, the dental-care environment comprising at least one device (U, T) related to dental treatment and a data system (S), which software product comprises a program stored on program storage means and being readable by a computer, *characterised* in that it comprises

- 5 a first routine by which information related to a predetermined event
- 10 is received in the data system from the dental-care-related device (U, T); and
- 15 a second routine by which said information is stored in the data system (S) so that it may be linked to the object of the event.

28. Software product according to claim 27, *characterised* in that said program comprises a routine for running a method according to any one of claims 15-21.